

REMARKS/ARGUMENTS

The Office Action dated May 27, 2009 and the references cited therein have been carefully considered. In response to the Office Action, Applicant has amended independent Claims 1, 18 and 22 and added new Claims 26-29 which, when considered with the remarks set forth below, are deemed to place the case with Claims 1-13 and 17-29 in condition for allowance.

Claim Rejections – 35 USC §§102 and 103

Claims 1-3, 7, 12, 18-19 and 22-24 have been rejected under 35 U.S.C. §102(b) as being anticipated by newly cited U.S. Patent No. 6,558,589 to Bergman. Claims 4-5, 8-9, 20-21 and 25 have been rejected under 35 U.S.C. §103(a) as being unpatentable over the Bergman patent and further in view of newly cited U.S. Patent No. 5,800,759 to Yamazaki. Claims 6, 10-11 and 17 have been rejected under 35 U.S.C. §103(a) as being unpatentable over the Bergman patent and further in view of previously cited U.S. Patent No. 4,822,553 to Marshall. Finally, Claims 4-5, 8-9, 13, 20-21 and 25 have been rejected under 35 U.S.C. §103(a) as being obvious over the Bergman patent and further in view of U.S. Patent No. 5,304,050.

In response, Applicants have amended independent Claims 1, 18 and 22, and have added new Claims 26-29 in order to clarify the features of the present invention. It is respectfully submitted that none of the cited prior art references, taken alone or combined, discloses all of the features of amended independent Claims 1, 18 and 22 and new independent Claim 26.

1. The Bergman patent fails to teach or suggest a mold cavity defined by male and female mold parts that are movable relative to each other within a mold.

Independent Claims 1, 18, 22 and 26 all recite a male and female mold part that define a mold cavity, wherein the male and female parts are movable relative to each other within a mold. Specifically, Claims 1 and 26 recite a mold cavity defined by a male and female part, which are movable relative to each other between “a first position” and “a second position,” wherein the distance between the male and female parts is reduced as the parts move from their first position

to their second position. Similarly, independent Claims 18 and 22 both recite a mold cavity defined by male and female parts that move “toward and away” from each other.

In stark contrast, the male and female mold parts defining the mold cavity disclosed in the Bergman patent remain fixed to each other during the entire molding process. In particular, the male and female mold parts (8, 9) disclosed in the Bergman patent do not move relative to each other, as defined in Claims 1, 18, 22 and 26 of the present application.

Instead, the Bergman patent discloses a high pressure molding process (e.g., 6000 bars), wherein a high pressure medium (4) is utilized to completely surround the mold parts (8, 9) to keep the closed mold parts in their closed position. Importantly, the Bergman patent does not teach or suggest a mold, in which the male/female parts are arranged such that they are mutually movable toward and away from each other within the mold. In fact, the Berman patent does not give any indication as to how the mold (7), or more specifically, the individual mold parts (8, 9) is/are to be opened, at all. To the contrary, the entire disclosure in the Berman patent aims at removing the mold (7) from the pressure chamber (4), in a closed condition, after the completion of the molding process.

It is further noted that the Bergman patent is very concerned with maintaining the mold (7) in a closed state throughout the molding process. In this regard, it is stated in the Bergman patent that “the mold material will try to press the two parts 8, 9 of the mold apart” and that this problem is solved by “ensuring that the mold 7 is isostatically balanced during the molding process.” Thus, the solution provided by the Bergman patent is a fluid medium that surrounds and acts upon the mold from all directions. (See column 3, lines 49-61.) This virtually ensures that there can be no movement of the mold parts with respect to each other, as clearly contrasted to Claims 1, 18, 22 and 26.

Nowhere in the Bergman patent is there any mention of moving the mold parts (8, 9) toward or away from each other during the molding process. Indeed, it is submitted that it would not be possible for the mold parts disclosed in the Bergman patent to move toward or away from each other, since doing so would allow the pressure medium surrounding the mold parts to enter

the mold cavity. Such result would clearly make the mold disclosed in the Bergman patent unfit for its intended purpose.

Accordingly, it is respectfully submitted that independent Claims 1, 18, 22 and 26, and the claims that depend therefrom, patentably distinguish over the prior art.

2. The Bergman patent fails to teach or suggest a mold cavity having a variable volume.

Claims 18 and 22 have been amended to recite male and female mold parts that define a mold cavity of variable volume. Independent Claims 1 and 26 already include this feature in their recitations of opposite facing mold parts that decrease in distance when the mold parts are moved from their first position to their second position. It is respectfully submitted that the Bergman patent fails to teach or suggest a mold cavity that changes in volume during the molding process, as defined in Claims 1, 18, 22 and 26.

As discussed above, the Bergman patent discloses a mold (7) having two mold parts (8, 9) that are fixed together during the entire molding process. In this regard, the volume of the mold cavity (10) defined by the mold parts (8, 9) remains constant. Indeed, the very goal of the Bergman patent is to ensure that the mold parts (8, 9) do not move with respect to each other during the molding process. This goal is achieved by completely surrounding the mold parts (8, 9) with a fluid medium to ensure that the mold (7) “is isostatically balanced during the molding process.”

Thus, the Bergman patent clearly fails to teach or suggest a mold cavity that changes in volume during the molding process. Accordingly, for this additional reason, it is respectfully submitted that independent Claims 1, 18, 22 and 26, and the claims that depend therefrom, patentably distinguish over the prior art.

3. The Bergman patent fails to teach or suggest a pressure medium moving male and female mold parts toward each other within a mold.

Claims 1, 18 and 22 have been amended to make clear that the pressure medium contained within the mold pressure chamber moves the male part and the female part together.

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New Claim 26 includes this same limitation. It is respectfully submitted that the Bergman patent fails to teach or suggest a pressure medium contained within a mold pressure chamber that moves a male mold part and a female mold part together, as defined in Claims 1, 18, 22 and 26.

Instead, the fluid medium provided in the pressure chamber disclosed in the Bergman patent completely surrounds the mold (7) so as to prevent the mold parts (8, 9) from separating. Thus, it is clear that the mold parts (8, 9) of the Bergman mold are already put together prior to application of pressure from the fluid medium. Therefore, the pressure medium disclosed in the Bergman patent does not move the mold parts together from a first position to a second position, as defined in the claims.

Accordingly, for this additional reason, it is respectfully submitted that Claims 1, 18, 22 and 26, and the claims that depend therefrom, patentably distinguish over the prior art.

Conclusion

In view of the foregoing amendments and remarks, favorable consideration and allowance of the application with Claims 1-13 and 17-29 are respectfully solicited. If the Examiner believes that a telephone interview would assist in moving the application toward allowance, he is respectfully invited to contact the Applicant's attorney at the telephone number listed below.

Respectfully submitted,

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